

49 (New). A method for treating or preventing Alzheimer's Disease in a mammal comprising administering to said mammal in need of such treatment or prevention an effective amount of a pyrimidine nucleotide precursor.

50 (New). A method for treating or preventing Huntington's Disease in a mammal comprising administering to said mammal in need of such treatment or prevention an effective amount of a pyrimidine nucleotide precursor.

51 (New). A method for treating or preventing a neuromuscular degenerative disease in a mammal comprising administering to said mammal in need of such treatment or prevention an effective amount of a pyrimidine nucleotide precursor.

52 (New). A method as in claim 51 wherein said neuromuscular degenerative disease is selected from the group consisting of muscular dystrophy, myotonic dystrophy, chronic fatigue syndrome and Friedreich's Ataxia.

53 (New). A method for treating or preventing pathophysiological consequences of mitochondrial respiratory chain dysfunction selected from the group consisting of developmental delay in cognitive, motor, language, executive function and social skills in a mammal comprising administering to said mammal in need of such treatment or prevention an effective amount of a pyrimidine nucleotide precursor.

54 (New) A method for treating or preventing pathophysiological consequences of mitochondrial respiratory chain dysfunction selected from the group consisting of optic neuropathy, autonomic neuropathy, neurogenic bowel dysfunction, sensorineural deafness, neurogenic bladder dysfunction and migraine in a mammal comprising administering to said mammal in need of such treatment or prevention an effective amount of a pyrimidine nucleotide precursor.

55 (New). A method for treating or preventing pathophysiological consequences of mitochondrial respiratory chain dysfunction selected from the group consisting of renal tubular acidosis, dilating cardiomyopathy and lactic acidemia in a mammal comprising administering to said mammal in need of such treatment or prevention an effective amount of a pyrimidine nucleotide precursor.

56 (New). A method as in claim 53 wherein said developmental delay is pervasive developmental delay or PDD-NOS.

57 (New). A method as in claim 53 wherein said developmental delay is Attention Deficit/Hyperactivity Disorder.

58 (New). A method as in claim 53 wherein said developmental delay is Rett's Syndrome.

59 (New). A method as in claim 53 wherein said developmental delay is autism.

60(New). A method for reducing side effects of cytotoxic cancer chemotherapy agents by administering a pyrimidine nucleotide precursor, where said cytotoxic chemotherapy agent is not a pyrimidine nucleoside analog.

61 (New). A method as in claim 60 wherein said side effects of cytotoxic cancer chemotherapy are selected from the group consisting of peripheral neuropathy, chemotherapy-induced menopause, chemotherapy-associated fatigue and depressed appetite.

62 (New). A method as in claim 48 wherein said pyrimidine nucleotide precursor is 2',3',5'-tri-O-acetyluridine.

63 (New). A method as in claim 49 wherein said pyrimidine nucleotide precursor is 2',3',5'-tri-O-acetyluridine.

64 (New). A method as in claim 50 wherein said pyrimidine nucleotide precursor is 2',3',5'-tri-O-acetyluridine.

65 (New). A method as in claim 51 wherein said pyrimidine nucleotide precursor is 2',3',5'-tri-O-acetyluridine.

66 (New). A method as in claim 53 wherein said pyrimidine nucleotide precursor is 2',3',5'-tri-O-acetyluridine.

67 (New). A method as in claim 54 wherein said pyrimidine nucleotide precursor is 2',3',5'-tri-O-acetyluridine.

68 (New). A method as in claim 55 wherein said pyrimidine nucleotide precursor is 2',3',5'-tri-O-acetyluridine.

69 (New). A method as in claim 60 wherein said pyrimidine nucleotide precursor is 2',3',5'-tri-O-acetyluridine.